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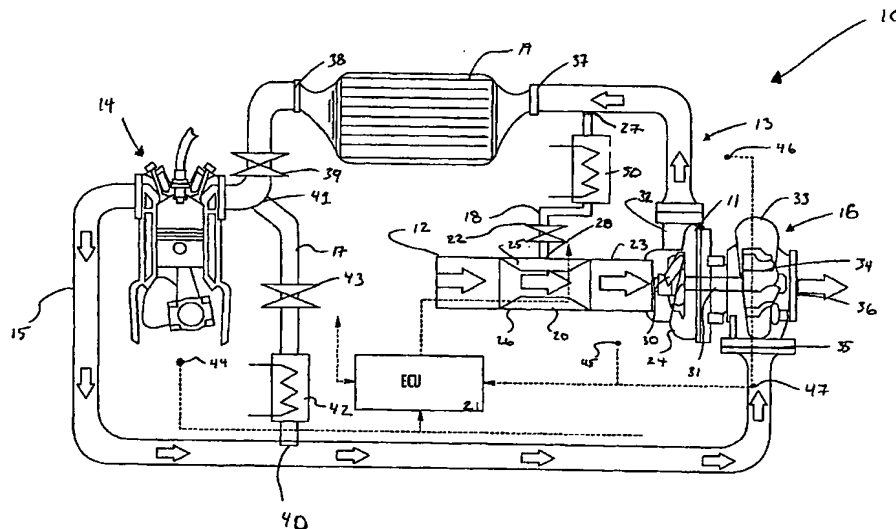
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(54) Title: SURGE CONTROL SYSTEM FOR A COMPRESSOR



(57) Abstract: A compressor active surge control system that includes an air recirculation line that has a first end connected down-  
stream of a compressor outlet and a second end connected upstream of a compressor inlet. The gas recirculation line recirculates  
compressed air from the compressor outlet to the compressor inlet. Also included in the system is a mixer positioned to receive both  
ambient air and recirculated air. Mixing of the air homogenizes the air prior to its introduction into the compressor. An air cooler  
may be included that cools the recirculated air prior to its introduction into the compressor. Cooling and mixing of the recirculated air  
expands the operating range of the compressor by reducing the incidence of surge. Various existing components, such as intercoolers  
and filters, may serve the additional duty of cooling or mixing the recirculated air.